SECRET

Copy 2 of 4

25X1A

HX-20

[redacted]

21 November 1960

25X1A [redacted]

Post Office Box 1407
Main Post Office
Washington 13, D. C.

Gentlemen:

Enclosed herewith are three (3) copies of the status report of technical progress on the photographic rectifier for the month of October, 1960

A copy of the report is being submitted directly to the Contracting Officer.

Very truly yours,

[redacted]

25X1A

cc: Contracting Officer

SECRET

TSD

FILE

1 November 1960

STATINTL

PHOTOGRAPHIC RECTIFIER-PRINTER

Report of Technical Progress

I. Progress During October, 1960

A significant amount of assembly and testing was accomplished during October. The video system has been reworked and testing is complete until final optical tests indicate possible trouble areas. The digital system checkout is essentially complete and compatability with the "X" servo drive has been established. Checkout of the "Y" index servo and register has been completed.

Fabrication and assembly for units 2, 3 and 4 has received considerable effort. Items completed for all units were; high and low frequency amplifiers, check-pulse amplifiers, focus current regulators, 90 volt and 1.4 KV power supplies, pneumatic and vacuum valves and transportapes. In addition, partial quantities of the 20 KV power supplies, X and Y deflection amplifiers have been completed. The Y index register for number 2 has been assembled and bench checkout is 90% complete. The remaining 3 consoles have been received and assembly of one for the next unit is in work.

Tape programs for 4:1 and 1:1 enlargements are complete, and the tape is punched for the 4:1 enlargment.

II. Anticipated Progress During November

System integration will continue during November. Checkout with tape commands is the next step and will take the better part of the month to complete. The estimate of systems test conclusion must be advanced to 1 February on the basis of present completion. Present manpower effort will continue and assembly and tests for units 2, 3 and 4 will continue as a parallel effort.

STATINTL

[redacted]

Project Engineer

JVS:kp
Encl.

PHASE DIAGRAM FOR PRINTER

	Pre-Design	Design	Release	Purchase Parts	Fabrication	Assembly
Structure	Complete	Complete	Complete	Complete	2 Complete	1 Complete
CRT Housing	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Elect. Parts	Complete	Complete	Complete	1 Complete	Complete	
Track Assy., X Drive Lead Screw	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Valve, Pneu. & Vacuum	Complete	Complete	Complete	Complete	Complete	1 Complete
Doors	Complete	Complete	Complete	Complete	Complete	Complete
Focus Current Regulator	Complete	Complete	Complete	Complete	Complete	Complete
X Deflection Amp.	Complete	Complete	Complete	Complete	Complete	1 Complete
Y Deflection Amp.	Complete	Complete	Complete	Complete	Complete	1 Complete
X Drive Assy.	Complete	Complete	Complete	Complete less motors	Complete	1 Complete
Film Index	Complete	Complete	Complete	Complete	Complete	1 Complete
Lens Board	Complete	Complete	Complete	Complete	2 Complete	2 Complete
Platen	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Cassettes	Complete	Complete	Complete	Complete	Complete	2 Complete
Vacuum Pump				1 Complete		1 Complete
Power Supply 20kv	Complete	Complete	Complete	Complete	Complete	3 Complete
Power Supply 90V	Complete	Complete	Complete	Complete	Complete	Complete
Program Relay Control	Complete	Complete	Complete	Complete	Complete	1 Complete
Gurley Disc Assy.	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Check Pulse Transistor Amp	Complete	Complete	Complete	Complete	Complete	Complete
HiFreq. Xsistor Amp	Complete	Complete	Complete	Complete	Complete	Complete
Check Pulse Separator	Complete	Complete	Complete	Complete	Complete	Complete
Sweep Linearizer	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Control	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Dynamic Focus	Complete	75% Compl.			1 Complete	

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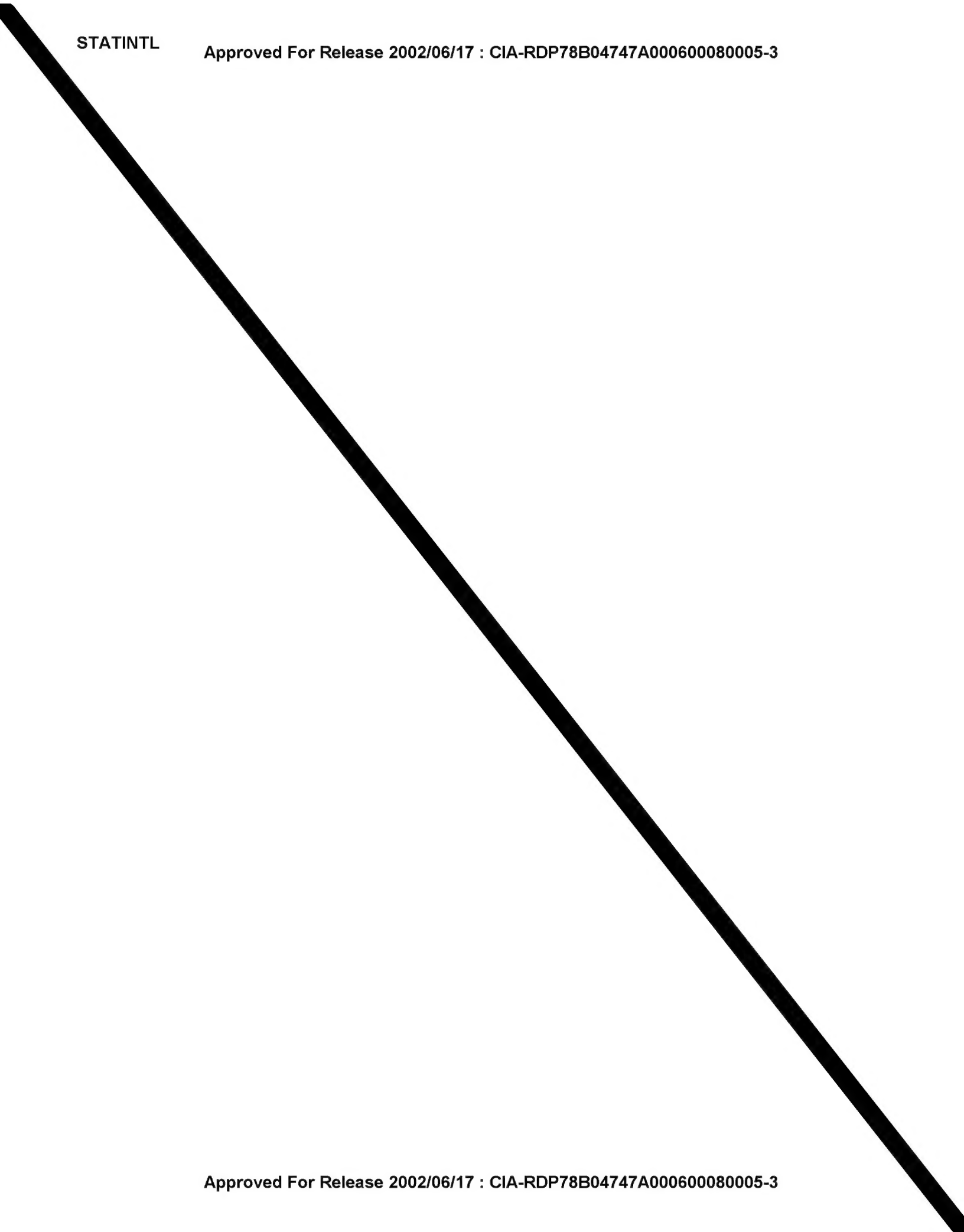
PHASE DIAGRAM FOR READER

	Pre-Design	Design	Release	Purchase Parts	Fabrication	Assembly
Structure	Complete	Complete	Complete	Complete	2 Complete 2 In Work	1 Complete
CRT Housing	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Elect. Parts	Complete	Complete	Complete	1 Complete		
Track Assy., X Drive Lead Screw	Complete	Complete	Complete	Complete less motor	1 Complete	1 Complete
Valve, Pneu. & Vacuum	Complete	Complete	Complete	Complete	Complete	Complete
Doors	Complete	Complete	Complete	Complete	Complete	In Work
Focus Current Regulator	Complete	Complete	Complete	Complete	Complete	Complete
X Deflection Amp.	Complete	Complete	Complete	Complete	Complete	2 Complete
Y Deflection Amp.	Complete	Complete	Complete	Complete	Complete	2 Complete
X Sweep Attenuator	Complete	Complete	Complete	Complete	Complete	1 Complete
Y Sweep Attenuator	Complete	Complete	Complete	Complete	Complete	1 Complete
Power Supply 20kv	Complete	Complete	Complete	Complete	Complete	3 Complete
Power Supply 1kv	Complete	Complete	Complete	Complete	Complete	Complete
PMT Drive & Servo	Complete	Complete	Complete	Complete less motor	Complete	1 Complete
Platen & Index Assy.	Complete	Complete	2 Complete	1 Complete	1 Complete	1 Complete
Film Index Drive & Servo	Complete	Complete	1 Complete	1 Complete	1 Complete	1 Complete
PM Assy. & Video Amplifier	Complete	Complete	Complete	Complete	Complete	Complete
Optisyn Pre-Amp	Complete	Complete	Complete	Complete	Complete	Complete
Check Pulse Transistor Amp	Complete	Complete	Complete	Complete	Complete	Complete
Dodging Commutator	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Sweep Linearizer	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Control	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Dynamic Focus	Complete	75%Complete	Complete	Complete	1 Complete	1 Complete
Cables (Internal)	Complete	Complete	Complete	Complete	1 Complete	1 Complete

PHASE DIAGRAM FOR CONSOLE

	Pre-Design	Design	Release	Purchase Parts	Fabrication	Assembly
Y Index Register	Complete	Complete	Complete	1 Complete	1 Complete	1 Complete 1 In work
Monitor Scope	Complete	Complete		Complete	Complete	1 Complete
Video Control	Complete	Complete		Complete	1 In Work	1 In Work
Sweep Generator	Complete	Complete		Complete	1 Complete 1 In Work	1 Complete 1 In Work
Power Control	Complete	Complete	Complete	1 Complete	1 Complete	1 Complete
Program Control	Complete	Complete	Complete		In Work	
Power Supply 125V	Complete	Complete	Complete	Complete	Complete	3 Complete
Power Supply 300V	Complete	Complete	Complete	Complete	2 Complete	2 Complete
Scan Servo	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Scan Comparator	Complete	Complete	Complete	Complete	Complete	1 Complete 1 In work
Scan Computor	Complete	Complete	Complete	Complete	Complete	1 Complete 1 In work
Tape Reader	Complete	Complete		1 Complete	1 Complete	1 Complete
Power Supply 6.3V	Complete	Complete	Complete	Complete	Complete	5 Complete
Transportape	Complete	Complete		Complete	Complete	Complete
Power Supply 28V	Complete	Complete	Complete	Complete	Complete	2 Complete
Cables (internal)	Complete	Complete	Complete		1 Complete	1 Complete
Rack	Complete	Complete	Complete	Complete	1 Complete 1 In work	1 Complete 1 In work



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 STATINTL

1 October 1960

[redacted]

PHOTOGRAPHIC RECTIFIER-PRINTER

Report of Technical Progress

I. Progress During September, 1960

The video system received a majority of the engineering attention during September, and is complete and ready for final operation with the remaining equipment. The "X", "Y" and Photomultiplier Transport Servos in the Reader have been checked out in the system. The "Y" Index Register has been incorporated and the "loop" closed. This is working very effectively. Cabling is complete. Several of the power supplies for Units 2, 3 and 4 were completed.

II. Problem Areas

Comments of last month on cathode-ray tubes is applicable again this month. The proposed meeting with [redacted] on a STATINTL
STATINTL comparable tube to the [redacted] has been delayed and will be held this month. Since cathode-ray tubes are available for Unit 1, this problem had been deferred.

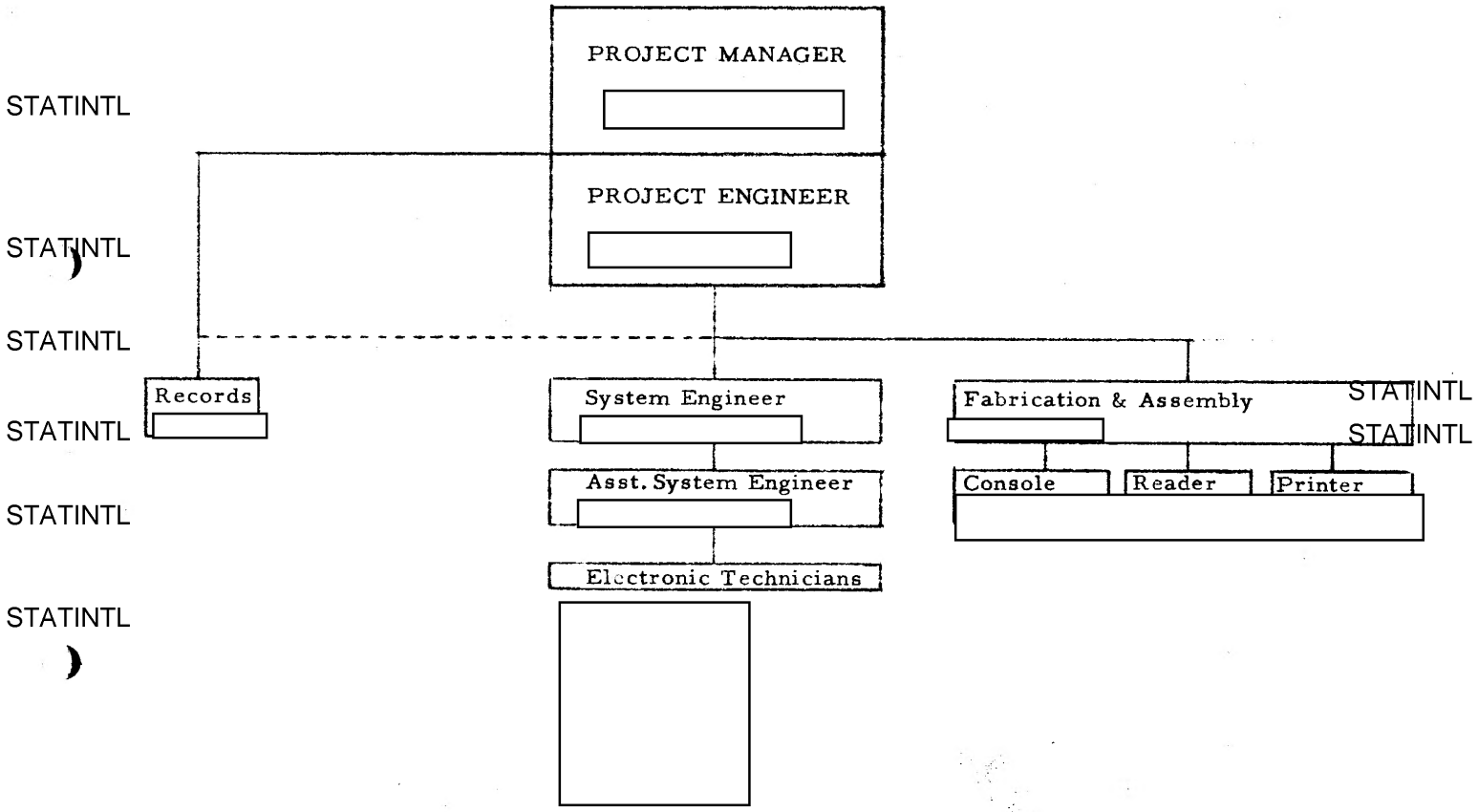
III. Progress Anticipated During October, 1960

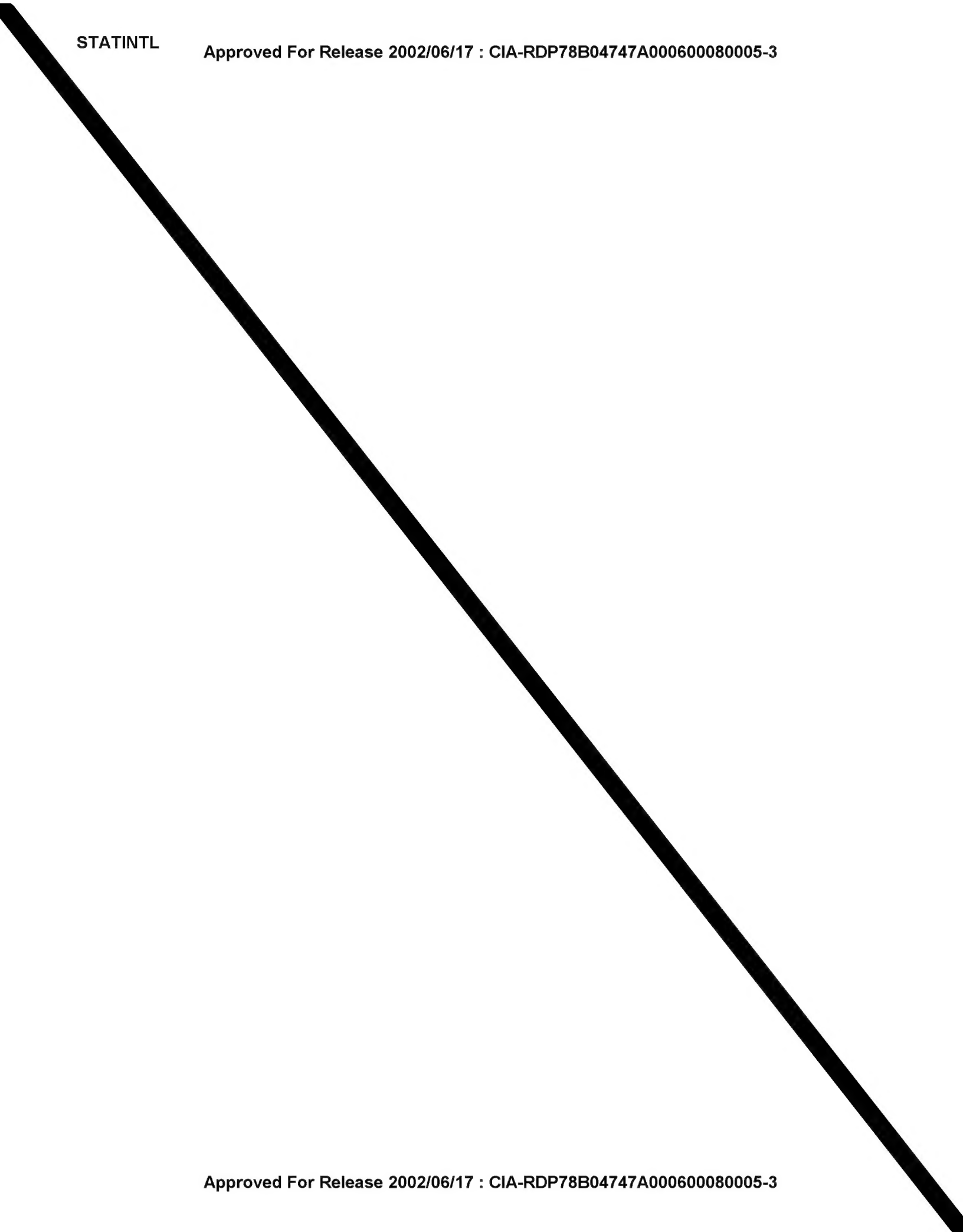
System checkout of the digital system will require most of the systems engineering time in October. Parallel effort to integrate the video system will be applied. The new synchronous motor for the Printer Drive is scheduled for delivery and will be incorporated as soon as received. The major effort will be applied to completing and system testing Unit 1. Personnel not required for this will continue work on the remaining assemblies and testing for Units 2, 3 and 4. Preliminary program has been prepared for delivery to the
STATINTL Programmer. [redacted] will produce tapes for enlargement and STATINTL calibration in October.

[redacted]

Project Manager

HLS/p
Encls.





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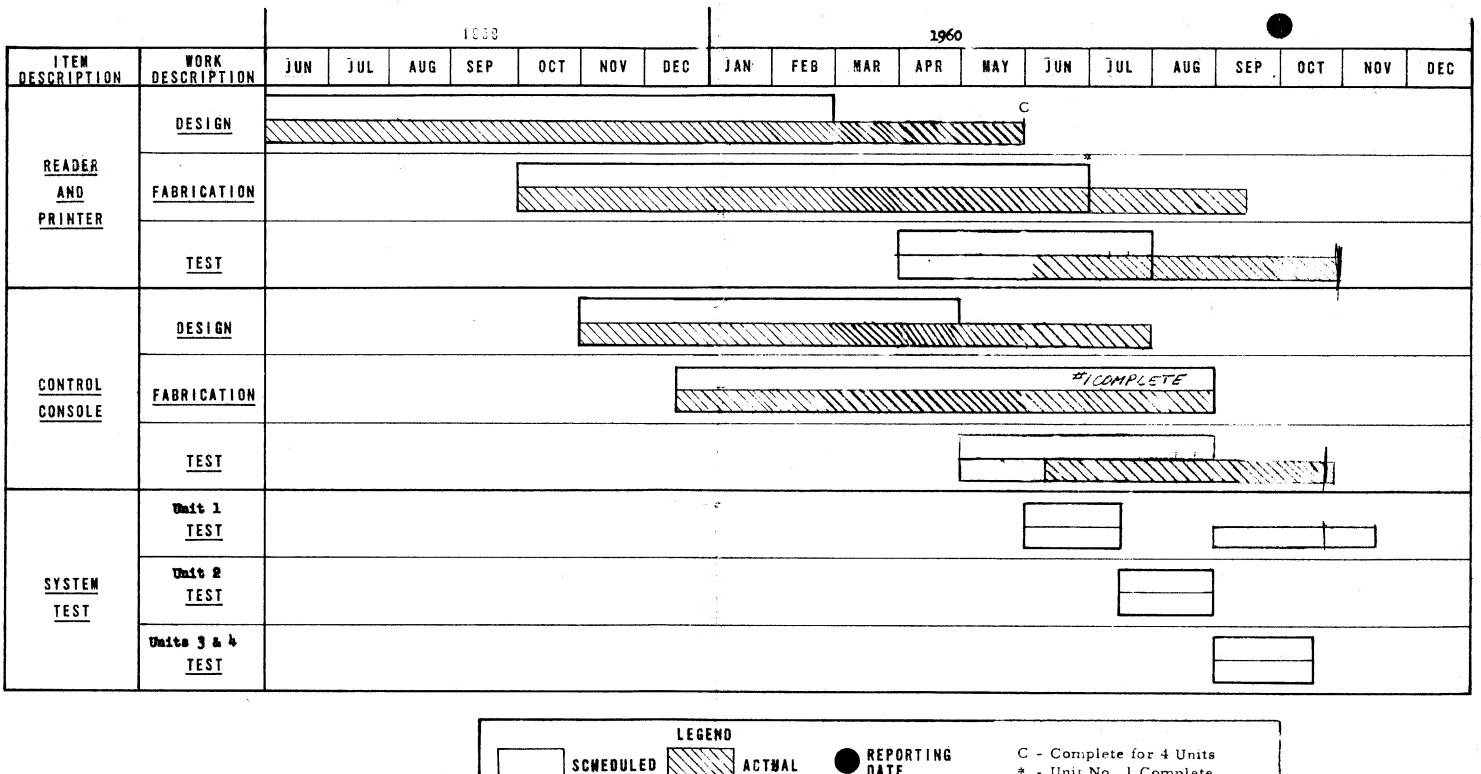
PHOTOGRAPHIC RECTIFIER-PRINTER
WORK SCHEDULE AND PROGRESS CHART



Enclosure (3)

PHASE DIAGRAM FOR READER

	Pre-Design	Design	Release	Purchase Parts	Fabrication	Assembly
Structure	Complete	Complete	Complete	Complete	2 Complete 2 In Work	1 Complete
CRT Housing	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Elect. Parts	Complete	Complete	Complete	1 Complete		
Track Assy., X Drive Lead Screw	Complete	Complete	Complete	Complete less motor	1 Complete	1 Complete
Valve, Pneu. & Vacuum	Complete	Complete	Complete	Complete	Complete	1 Complete
Doors	Complete	Complete	Complete	Complete	Complete	In Work
Focus Current Regulator	Complete	Complete	Complete	Complete	Complete	4 Complete
X Deflection Amp.	Complete	Complete	Complete	Complete	Complete	1 Complete
Y Deflection Amp.	Complete	Complete	Complete	Complete	Complete	1 Complete
X Sweep Attenuator	Complete	Complete	Complete	Complete	Complete	1 Complete
Y Sweep Attenuator	Complete	Complete	Complete	Complete	Complete	1 Complete
Power Supply 20kv	Complete	Complete	Complete	Complete	Complete	3 Complete
Power Supply 1kv	Complete	Complete	Complete	Complete	Complete	3 Complete
PMT Drive & Servo	Complete	Complete	Complete	Complete less motor	Complete	1 Complete
Platen & Index Assy.	Complete	Complete	1 Complete	1 Complete	1 Complete	1 Complete
Film Index Drive & Servo	Complete	Complete	1 Complete	1 Complete	1 Complete	1 Complete
PM Assy. & Video Amplifier	Complete	Complete	Complete	Complete	Complete	Complete
Optisyn Pre-Amp	Complete	Complete	Complete	Complete	Complete	Complete
Check Pulse Transistor Amp	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Dodging Commutator	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Sweep Linearizer	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Control	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Dynamic Focus	Complete	75%Complete	Complete	Complete	1 Complete	1 Complete
Cables (Internal)	Complete	Complete	Complete	Complete	1 Complete	1 Complete

PHASE DIAGRAM FOR PRINTER

	Pre-Design	Design	Release	Purchase Parts	Fabrication	Assembly
Structure	Complete	Complete	Complete	Complete	2 Complete	1 Complete
CRT Housing	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Elect. Parts	Complete	Complete	Complete	1 Complete	Complete	
Track Assy., X Drive Lead Screw	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Valve, Pneu. & Vacuum	Complete	Complete	Complete	Complete	Complete	1 Complete
Doors	Complete	Complete	Complete	Complete	Complete	Complete
Focus Current Regulator	Complete	Complete	Complete	Complete	Complete	4 Complete
X Deflection Amp.	Complete	Complete	Complete	Complete	Complete	1 Complete
Y Deflection Amp.	Complete	Complete	Complete	Complete	Complete	1 Complete
X Drive Assy.	Complete	Complete	Complete	Complete less motors	Complete	1 Complete
Film Index	Complete	Complete	Complete	Complete	Complete	1 Complete
Lens Board	Complete	Complete	Complete	Complete	2 Complete	2 Complete
Platen	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Cassettes	Complete	Complete	Complete	Complete	Complete	2 Complete
Vacuum Pump				1 Complete		1 Complete
Power Supply 20kv	Complete	Complete	Complete	Complete	Complete	2 Complete
Power Supply 90V	Complete	Complete	Complete	Complete	Complete	1 Complete
Program Relay Control	Complete	Complete	Complete	Complete	Complete	1 Complete
Gurley Disc Assy.	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Check Pulse Transistor Amp	Complete	Complete	Complete	Complete	1 Complete	1 Complete
HiFreq. Xsistor Amp	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Check Pulse Separator	Complete	Complete	Complete	Complete	Complete	Complete
Sweep Linearizer	Complete	Complete	Complete	Complete	1 Complete	1 Complete
CRT Control	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Dynamic Focus	Complete	75% Compl.			1 Complete	

PHASE DIAGRAM FOR CONSOLE

	Pre-Design	Design	Release	Purchase Parts	Fabrication	Assembly
Y Index Register	Complete	Complete	Complete	1 Complete	1 Complete	1 Complete
Monitor Scope	Complete	Complete		Complete	Complete	1 Complete
Video Control	Complete	Complete		Complete	1 In Work	1 In Work
Sweep Generator	Complete	Complete		Complete	1 Complete	1 Complete
Power Control	Complete	Complete	Complete	1 Complete	1 Complete	1 Complete
Program Control	Complete	Complete	Complete		In Work	
Power Supply 125V	Complete	Complete	Complete	Complete	Complete	3 Complete
Power Supply 300V	Complete	Complete	Complete	Complete	2 Complete	2 Complete
Scan Servo	Complete	Complete	Complete	Complete	1 Complete	1 Complete
Scan Comparator	Complete	Complete	Complete	Complete	Complete	1 Complete
Scan Computor	Complete	Complete	Complete	Complete	Complete	1 Complete
Tape Reader	Complete	Complete		1 Complete	1 Complete	1 Complete
Power Supply 6.3V	Complete	Complete	Complete	Complete	Complete	5 Complete
Transportape	Complete	Complete		Complete	Complete	Complete
Power Supply 28V	Complete	Complete	Complete	Complete	Complete	2 Complete
Cables (internal)	Complete	Complete	Complete		1 Complete	1 Complete
Rack	Complete	Complete	Complete	Complete	1 Complete	1 Complete